Thursday, March 20, 2003
POSTER SESSION II
7:00 p.m. Fitness Center

Asteroids and Comets

Binzel R. P. Harris A. W. Bus S. J. Rivkin A. S. Burbine T. H.
SMASS Near-Earth Object Survey: An Album of Results **[#1254]**
This poster presents a "family album" of visible and near-infrared spectra for more than 300 near-Earth objects. These data were obtained through the Small Main-Belt Asteroid Spectroscopic Survey (SMASS) program.

Rivkin A. S. Hiroi T. Horz F. Cintala M. Pierazzo E.
Spectroscopy of Impacted Serpentine: Implications for Asteroid Surfaces **[#1716]**
We present visible and infrared spectroscopy of serpentine samples which have been subjected to impact. The impact stresses range from 20–41 GPa.

Cheng A. F. Barnouoin-Jha O.
Highest Resolution Topography of 433 Eros and Implications for MUSES-C **[#1353]**
The highest resolution observations of surface morphology and topography of Eros from the NEAR landing provide unique information on rock distributions and landing hazards. The rock areal coverage is 18%, and one topographic feature would have been hazardous.

Cloutis E. A.
Dark Asteroids: Insights into Surface Composition from Coal Spectra **[#1067]**
Reflectance spectra of coals provide valuable insights into the possible surface compositions of dark asteroids. These data suggest that only the most red-sloped asteroid spectra will exhibit organic-associated absorption bands.

Ueda Y. Miyamoto M. Mikouchi T. Hiroi T.
Surface Material Analysis of the S-Type Asteroids: Removing the Space Weathering Effect from Reflectance Spectrum **[#2078]**
We removed the space weathering effect from reflectance spectra of asteroids 7 Iris and 532 Herculina. After removing, they had similar features to that of L or LL chondrite. This suggests the connection between ordinary chondrite and two asteroids.

Clark P. E. Killen R.
Understanding the Nature of Metal Segregation in Asteroid Regolith **[#1868]**
We discuss how segregating a metallic component would modify the apparent element and mineral abundance ratios relative to the parent material and the impact such a process would have on remote spectral measurements.

Holsapple K. A.
On Nuking Menacing Asteroids **[#1799]**
I present recent results for the effectiveness of diverting menacing asteroids using nuclear weapons. Surface burst will not work for porous asteroids. Standoff weapons will be effective only if detonated very close to the surface.

Kikwaya J.-B. Thuillot W. Rocher P. Viera Martins R. Arlot J.-E. Angeli Cl.
Does 146 Lucina Have a Satellite? An Astrometric Approach **[#1214]**
An astrometric technique is described for finding and characterizing asteroid satellites. This technique has been applied to observations of asteroid 146 Lucina, which suggests that it may have a satellite.

Durda D. D.

Discontinuities in Size-Strength Scaling Laws: Another Source of Wavy Size Distributions **[#1932]**
Particle size distributions in mutually-colliding systems are dependent upon the strength properties of the particles. Discontinuities in the size-strength scaling relations at small particle sizes can induce significant waves in evolved size distributions.

Watters T. R. Robinson M. S.

Boundary Element Modeling of the Rahe Dorsum Thrust Fault on Asteroid 433 Eros **[#1928]**
Rahe Dorsum is one of the most striking features on the surface of Eros and strongly resembles landforms called lobate scarps found on terrestrial planets interpreted to be the surface expression of thrust faults.

Gladman B.

Transfer of Mercurian Impact Ejecta to Earth and Implications for Mercurian Meteorites **[#1933]**
The transfer efficiency of impact ejecta from Mercury to the Earth is calculated to be of order 0.1%. Implications for the possibility of meteorites from Mercury are explored.

Liou J.-C. Kessler D. J. Matney M. J. Stansbery E. G.

A New Approach to Evaluate Collision Probabilities Among Asteroids, Comets, and Kuiper Belt Objects **[#1828]**
This is a new approach to evaluate the long-term collision probabilities among asteroids, comets, and Kuiper Belt objects. This new method is based on uniform sampling in time and is more general than the classical method.